ESO 1622

Calculating Depreciation on Farm Property Acquired in 1989[1]

The 1981 Tax Act divided depreciable property into two major categories: recovery property and non-recovery property. Recovery property includes most property placed in service after 1980. Non-recovery property includes property which you owned or used prior to 1981 and property acquired from a related party who used it prior to 1981.

Depreciation rules under the 1981 tax act were called the accelerated cost recovery system (ACRS). The 1986 Tax Reform Act and later changes in the rules call this the modified accelerated cost recovery system (MACRS). This newsletter will summarize MACRS and explain how to apply these new rules to farm property purchased in 1989.

MACRS divides depreciable property into eight classes: 3, 5, 7, 10, 15, 20, 27½, or 31½ year property.

* Three-year property includes over-the-road tractors and breeding swine.

* Five-year property includes cars, pickups, vans, breeding cattle and sheep, computers, typewriters, and all trucks except over-the-road tractors.

* Seven-year property includes most machinery and equipment, grain bins, and fences.

* Ten-year property includes ships, barges, tugs, and single-purpose livestock and horticulture structures, orchards and vineyards. A single-purpose livestock structure is specifically designed, constructed, and used for housing, raising, and feeding a particular type of livestock. Hog facilities such as a farrowing house, nursery, or feeding floor usually qualify. Milking parlors do too. General-purpose buildings do not qualify even if they are used solely to house livestock. The structure must be designed to limit its reasonable use to only housing one kind of animal.

* Fifteen-year property includes manufactured homes, paved lots, and drainage tile.

* Twenty-year property includes general farm buildings such as machine sheds and hay barns.

* Twenty-seven-and-a-half-year property includes residential rental property.

* Thirty-one-and-a-half-year property includes other depreciable real property such as office buildings, motels, retail stores, etc.

Under MACRS, as under ACRS, salvage value is always zero.

At first, depreciation may appear to be a hopelessly complex subject. But, in practice, it can be simplified to three decisions which the taxpayer must make.

Decision No. 1: To Expense or Not?

Under the 1986 tax law, the taxpayer has the option to immediately deduct or "expense" up to $10,000 worth of the cash difference paid for qualifying newly acquired property which is in the 3, 5, 7, 10, or 15-year class. Section 179 expensing can be an attractive choice since it provides an additional deduction of up to $10,000 during the first year. You cannot expense an amount greater than your net business profit, nor can you expense an amount greater than the cash difference paid for qualifying assets. But you may allocate the $10,000 among several assets.

Table 1 illustrates this option using a tractor as an example. With Option A, expensing, the farmer receives a $10,000 deduction by expensing, but his remaining depreciable basis is reduced from $40,000 to $30,000. With Option B, no expensing is claimed and the basis for depreciation remains $40,000. Total depreciation in year 1 will be the amount expensed plus the first-year depreciation.

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Table 1. Expensing

In 1989 Fred Farmer traded his old tractor (adjusted cost basis or book value of $9,000) for a new one and paid $31,000 "boot."

Option A: Expensing		**Option B: No Expensing**	
Cash Paid	$31,000	Cash Paid	$31,000
plus Trade-In	9,000	plus Trade-In	9,000
BASIS	$40,000	BASIS	$40,000
Minus Amount Expensed	-10,000	Minus Amount Expensed	- 0
Depreciation Basis	$30,000	Depreciation Basis	$40,000

Decision No. 2: Which Depreciation Method?

The four choices for newly acquired ***farm*** property are:

* Regular MACRS recovery period with 150% Declining Balance (DB) method.

  [Note: Farm property is limited to 150% DB after 1988 for regular MACRS. But 200% DB is still the method for regular MACRS for all other qualifying business property in the 3, 5, 7, and 10 year property classes.]

* Regular MACRS period with Straight Line (SL) method.

* Alternate MACRS recovery period (usually longer than regular MACRS) with 150% DB.

* Alternate MACRS period with straight line.

However, all items within a property class purchased the same year must be depreciated using the same method. This rule does not apply to 27½ and 31½ year property. For these two classes, an item-by-item election is allowed.

Decision No. 3: Which Convention Applies?

a. Mid-Month Convention For 27½ and 31½ year property, a mid-month convention is used in calculating depreciation for the year of acquisition and the year of disposal. Depreciation is calculated from the middle of the month of purchase or sale. Thus for calendar year taxpayers, a building acquired during January will receive 11½ months of depreciation during the first year.

b. Mid-Quarter Convention A mid-quarter convention is used for 3, 5, 7, 10, 15 and 20 year property, if more than 40 percent of the total is placed in service during the last three months of the tax year. Under this convention, all 3, 5, 7, 10, 15, or 20 year property is depreciated as if acquired at the mid-point of the quarter placed in service. Thus, for a calendar year taxpayer, a tractor purchased in April would receive 2½ quarters or five-eighths of a year's depreciation during the first year.

c. Mid-Year Convention Unless the mid-quarter convention described above applies, all 3, 5, 7, 10, 15, and 20 year property is treated as placed in service in the middle of the year. Thus, one-half of a year's depreciation is claimed in the year of purchase. If such property is sold or otherwise disposed of before its undepreciated basis reaches zero, one-half of a year's depreciation is claimed in the year of disposition, regardless of when during the year it is sold.

Depreciable property, whether new or used, is depreciated over a tax period one year longer than its property class, e.g. 7-year property is depreciated over 8 tax years. Under the DB method, annual depreciation is calculated by using the 150% declining balance method with changeover to straight line when it results in a higher annual amount. The tables below can be used to calculate the annual depreciation for all choices. **The tables provide the annual percentage to multiply times the original basis.** For example, a calculator under regular MACRS has a 5-year recovery period, so you would use Table 5. Under the 150% method for AMT purposes, it has a recovery period of 6 years, and you would use Table 6. To use these tables:

1. Select the recovery period from table 3 (regular or alternate MACRS).

2. For DB, find the right table from among Tables 4-11.
   For SL, use Table 12.
   For rental 27½ or real 31½ year property, use Table 13, 14, or 15.

3. Select the column in the table corresponding to the appropriate convention determined above.

4. For Tables 4-11, multiply the depreciable basis times the percent from the appropriate line in the table. For tables 12-15, use the formula below the table.

Table 2 below shows typical results from all four methods.

Which depreciation method should you choose? For most taxpayers, the regular MACRS method is preferred since it results in the fastest depreciation.

However, if you are not making any money farming, and not paying any income taxes, you are not interested in the fastest depreciation. You may elect the slower alternative straight-line method in order to save depreciation for future years when, hopefully, you will be making money and may have tax problems.

Note on AMT. A few farmers have to file an alternative minimum tax (AMT) return. This occurs when you have large amounts of rapid depreciation, tax-free interest, and similar tax advantages. If you face this problem, you may choose the alternate MACRS recovery period using 150% DB. This method generates rapid depreciation in the early years, is allowed for both regular taxes and AMT, and avoids the need for separate depreciation schedules.

Restrictions on "Listed Property" There are restrictions on the depreciation of automobiles, trucks, computers, entertainment or recreation property placed in service after June 18, 1984 unless the property is used more than 50% for business activities. If business use is 50% or less, you cannot use accelerated methods of depreciation. Only straight line over alternative MACRS life may be used.

An additional restriction is placed on vehicles placed in service after June 18, 1984 which weigh 6,000 pounds or less, even if used 100% for business. Such vehicles have dollar limits on annual depreciation, depending on date placed in service. For example, for autos placed in service after 12/31/86, depreciation is limited to $3,200 (including any first-year expensing deduction) the first year and $4,800 in the second and later tax years. Starting in 1989, the limits will be adjusted for inflation.

Summary Keeping up with changes in the tax laws can be a difficult but financially rewarding task. There are two decisions facing the farmer in regard to depreciation. For farmers who are paying little or no income taxes, usually the best choices are to forego expensing and use alternative MACRS depreciation. Keep in mind that tax rules are continually changing. Always check for the latest rules before making major decisions.

Table 2. Depreciation Choices, Trade or Business of Farming Property: Regular MACRS, Optional Straight Line, Alternative MACRS - 150%, and Alternative MACRS - Straight Line

In 1989 Fred Farmer traded his old tractor (adjusted cost basis or book value $9,000) for a new one and paid $31,000 "boot." Fred elected to expense $10,000 of the cost. Use the mid-year convention.

Tax Year	Regular MACRS	MACRS Straight Line	Alt-MACRS 150% DB	Alternative MACRS - SL
1	$3,214.20	$2,142.87	$2,250.00	$1,500.00
2	5,739.90	4,285.71	4,162.50	3,000.00
3	4,509.90	4,285.71	3,538.20	3,000.00
4	3,674.70	4,285.71	3,007.50	3,000.00
5	3,674.70	4,285.71	2,621.70	3,000.00
6	3,674.70	4,285.71	2,621.70	3,000.00
7	3,674.70	4,285.71	2,622.00	3,000.00
8	1,837.20	2,142.87	2,621.70	3,000.00
9	--	--	2,622.00	3,000.00
10	--	--	2,621.70	3,000.00
11	--	--	1,311.00	1,500.00
Total	$30,000.00	$30,000.00	$30,000.00	$30,000.00

Table 3. Recovery Periods for Selected Farm Assets: ACRS, Regular MACRS, and Alternative MACRS, 1989

Asset	Recovery Period in Years		
	ACRS	Regular MACRS	Alternative MACRS
Airplane	5	5	6
Auto	3	5	5
Calculators	5	5	6
Cattle (dairy or breeding)	5	5	7
Communication equipment	5	7	10
Computer and peripheral equipment	5	5	5
Computer software	5	7	12*
Copiers	5	5	6
Cotton ginning assets	5	7	12
Farm buildings (general purpose)	19	20	25
Farm equipment and machinery	5	7	10
Fences (agricultural)	5	7	10
Goats (breeding or milk)	3	5	5
Grain bin	5	7	10
Greenhouse (single purpose structure)	5	10	15
Helicopter (agricultural use)	5	5	6
Hogs (breeding)	3	3	3
Horses (non-race, less than 12 years of age)	5	7	10
Horses (non-race, 12 years of age or older)	3	3	10
Logging equipment	5	5	6
Machinery (farm)	5	7	10
Manufactured homes (rental or employee)	10	15	20
Office equipment (other than calculators, copiers or typewriters)	5	7	10
Office fixtures	5	7	10
Office furniture	5	7	10
Orchards	5	10**	20
Paved lots	5	15	20
Pickups	3	5	5
Property with no class life	5	7	12
Rental property (non-residential)	19	31.5**	40**
Rental property (residential)	19	27.5**	40**
Research property	5	5	12*
Sheep (breeding)	3	5	5
Single purpose agricultural structure	5	10	15
Solar property	5	5	12*
Tile (drainage)	5	15	20
Tractor units for use over-the-road	3	3	4
Trailer for use over-the-road	5	5	6
Truck (heavy duty, general purpose)	5	5	6
Truck (light, less than 13,000 lbs.)	3	5	5
Typewriter	5	5	6
Vineyard	5	10**	20
Wind energy property	5	5	12*

* No class life specified. Therefore, 12-year default life assigned.
** Straightline method required.

Table 4. Annual Depreciation Percentages for 3-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	25.000%	43.750%	31.250%	18.750%	6.250%
2	37.500	28.125	34.375	40.625	46.875
3	25.000	25.000	25.000	25.000	25.000
4	12.500	3.125	9.375	15.625	21.875
Total	100.000%	100.000%	100.000%	100.000%	100.000%

Table 5. Annual Depreciation Percentages for 5-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	15.000%	26.250%	18.750%	11.250%	3.750%
2	25.500	22.125	24.375	26.625	28.875
3	17.850	16.520	17.062	18.637	20.212
4-5	16.660	16.520	16.763	16.567	16.404
6	8.330	2.065	6.287	10.354	14.355
Total	100.000%	100.000%	100.000%	100.000%	100.000%

Table 6. Annual Depreciation Percentages for 6-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	12.500%	21.875%	15.625%	9.375%	3.125%
2	21.875	19.531	21.094	22.656	24.219
3	16.406	14.649	15.820	16.992	18.164
4-6	14.063	14.062	14.063	14.063	14.062
7	7.032	1.759	5.272	8.788	12.306
Total	100.000%	100.000%	100.000%	100.000%	100.000%

EXAMPLE: In October 1989, George Burns purchases beef cows for $30,000, his only 1989 capital purchase. Total business income is $9,000 in 1989 and he wants to maximize depreciation. What is the maximum depreciation deduction in 1989? In 1990? The beef cows are 5-year property. Sec. 179 expensing and MACRS will generate the most depreciation in 1989. George's business income limits the Sec. 179 deduction to $9,000. Since the only asset purchased in 1989 was in the 4th quarter, 100% exceeds 40% of 1989 asset purchases, and he must use the mid-quarter convention. In Table 5, the percentages for 5-year property placed in service in the 4th quarter are 3.75% and 28.875% for 1989 and 1990, respectively. Therefore:

1989 Depreciation = 9,000 + (21,000 x .03750) = $9,788
1990 Depreciation = 21,000 x .28875 = $6,064

Table 7. Annual Depreciation Percentages for 7-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	10.714%	18.750%	13.393%	8.036%	2.679%
2	19.133	17.411	18.559	19.707	20.854
3	15.033	13.680	14.582	15.484	16.386
4	12.249	12.160	12.221	12.275	12.874
5-7	12.249	12.160	12.221	12.275	12.182
8	6.124	1.520	4.582	7.673	10.661
Total	100.000%	100.000%	100.000%	100.000%	100.000%

Table 8. Annual Depreciation Percentages for 10-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	7.500%	13.125%	9.375%	5.625%	1.875%
2	13.875	13.031	13.594	14.156	14.719
3	11.794	11.077	11.555	12.033	12.511
4	10.025	9.415	9.821	10.228	10.634
5	8.739	8.711	8.730	8.748	9.039
6-10	8.739	8.710	8.730	8.748	8.718
11	4.372	1.092	3.275	5.470	7.632
Total	100.000%	100.000%	100.000%	100.000%	100.000%

Table 9. Annual Depreciation Percentages for 12-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	6.250%	10.938%	7.813%	4.688%	1.563%
2	11.719	11.133	11.523	11.914	12.305
3	10.254	9.741	10.083	10.425	10.767
4	8.972	8.524	8.823	9.122	9.421
5	7.851	7.458	7.720	7.981	8.243
6-12	7.327	7.327	7.327	7.327	7.327
13	3.665	0.917	2.749	4.581	6.412
Total	100.000%	100.000%	100.000%	100.000%	100.000%

Table 10. Annual Depreciation Percentages for 15-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	5.000%	8.750%	6.250%	3.750%	1.250%
2	9.500	9.125	9.375	9.625	9.875
3	8.550	8.212	8.437	8.662	8.887
4	7.695	7.391	7.593	7.796	7.998
5	6.925	6.652	6.834	7.017	7.198
6	6.232	5.987	6.151	6.315	6.479
7-15	5.905	5.905	5.905	5.905	5.905
16	2.953	0.738	2.215	3.691	5.168
Total	100.000%	100.000%	100.000%	100.000%	100.000%

Table 11. Annual Depreciation Percentages for 20-Year Recovery Period, 150% DB

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	3.750%	6.562%	4.687%	2.812%	0.937%
2	7.218	7.007	7.148	7.289	7.429
3	6.677	6.482	6.612	6.742	6.872
4	6.176	5.996	6.116	6.236	6.357
5	5.713	5.546	5.657	5.769	5.880
6	5.285	5.130	5.233	5.336	5.439
7	4.888	4.745	4.841	4.936	5.031
8	4.522	4.457	4.477	4.568	4.654
9-20	4.461	4.460	4.463	4.460	4.458
21	2.239	0.555	1.673	2.792	3.905
Total	100.000%	100.000%	100.000%	100.000%	100.000%

Table 12. Annual Fractions for Straight Line Over N Years (N < 26)

Tax Year	Mid-Year Convention	Mid-Quarter Convention, Quarter Placed in Service 1	2	3	4
1	1/2	7/8	5/8	3/8	1/8
2-N	1	1	1	1	1
N+1	1/2	1/8	3/8	5/8	7/8

DEPRECIATION FORMULA: Basis ÷ N times number from above table.

Table 13. Annual Fractions for 27½ Year Property, Regular MACRS

Tax Year	Month Placed in Service											
	1	2	3	4	5	6	7	8	9	10	11	12
1	11.5	10.5	9.5	8.5	7.5	6.5	5.5	4.5	3.5	2.5	1.5	0.5
2-27	12	12	12	12	12	12	12	12	12	12	12	12
28	6.5	7.5	8.5	9.5	10.5	11.5	12	12	12	12	12	12
29	-	-	-	-	-	-	0.5	1.5	2.5	3.5	4.5	5.5

DEPRECIATION FORMULA: Basis ÷ 27½ ÷ 12 times number from above table.

Table 14. Annual Fractions for 31½ Year Property, Regular MACRS

Tax Year	Month Placed in Service											
	1	2	3	4	5	6	7	8	9	10	11	12
1	11.5	10.5	9.5	8.5	7.5	6.5	5.5	4.5	3.5	2.5	1.5	0.5
2-31	12	12	12	12	12	12	12	12	12	12	12	12
32	6.5	7.5	8.5	9.5	11.5	12	12	12	12	12	12	12
33	-	-	-	-	-	-	0.5	1.5	2.5	3.5	4.5	5.5

DEPRECIATION FORMULA: Basis ÷ 31½ ÷ 12 times number from above table.

Table 15. Annual Fractions for Alternative MACRS, 40 Years

Tax Year	Month Placed in Service											
	1	2	3	4	5	6	7	8	9	10	11	12
1	11.5	10.5	9.5	8.5	7.5	6.5	5.5	4.5	3.5	2.5	1.5	0.5
2-40	12	12	12	12	12	12	12	12	12	12	12	12
41	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5

DEPRECIATION FORMULA: Basis ÷ 40 ÷ 12 times number from above table.